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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,065	01/12/2001	Appadurai Thangaraj	4355D (DIV)	3120
7590	07/01/2004		EXAMINER	
			NGUYEN, NGOC YEN M	
			ART UNIT	PAPER NUMBER
			1754	
DATE MAILED: 07/01/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/760,065	THANGARAJ ET AL. <i>[Signature]</i>
	<b>Examiner</b>	<b>Art Unit</b>
	Ngoc-Yen M. Nguyen	1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 May 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 26-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 26-60 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 17, 2004 has been entered.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26-60 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 26, there is no sufficient support in the instant specification for the limitation "uncoated metal chlorite". Applicants have pointed support for such limitation in the Examples, however, in these examples, the technical grade metal chlorite is mixed with the acid forming component, and however, there is no support for "uncoated". It should be noted that silence not alone equivalent to a disclosure in the specification for a negative limitation, Ex Parte Grasseli 231 USPQ 393, In re Langdon

77 F.2d 920, 25 USPQ 415. It should be noted that there is no clear evidence on record to show that 'technical grade chlorite' would inherently be "uncoated". Furthermore the "uncoated metal chlorite", as now claimed, would include other grades of metal chlorite beside the disclosed technical grade.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 26-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 581 550 in view of either CN 1,104,610 or CA 959,238.

EP '550 discloses a solid composition capable of releasing chlorine dioxide upon dissolution in water, said composition comprising:

- a. a water soluble chlorite salt
- b. an oxidizing chlorine-releasing agent, in the form of one or more sodium- and/or potassium-dichloro-s-triazinetrione(s)s and/or trichloro-s-triazinetrione(s); and
- c. a proton-donor serving as a water-soluble agent capable of lowering the pH of an aqueous solution to less than 3 (note claim 1).

For the size of the composition, i.e., whether the composition is in the form of powder, tablet or agglomerate, such limitation is not seen as a patentable difference because it would have been obvious to one skilled in the art to select the proper form for

the composition as long as the composition can still react to form chlorine dioxide when it contacts water.

The difference is EP '550 does not teach a membrane that separates the solid composition and the water solution.

CN '610 is applied as stated above to teach that it is known and convenient way to place the chlorine generating composition in a bag so that the composition can be added to the water in a pre-measured amount by throwing the bag in the water.

Alternatively, CA '238 can be applied as stated below.

CA '238 discloses a process for producing chlorine dioxide by introducing water into a receptacle which contains a chlorite of an alkali metal or an alkaline earth metal and an acid. The chlorite and the acid are wrapped or packed in a water soluble envelope or container so that upon the introduction of water into the receptacle, the water soluble envelopes dissolve, to react and to form chlorine dioxide which is immediately absorbed by the water to form an aqueous chlorine dioxide or chlorous acid solution (note page 4, first full paragraph).

For claim 60, it would have obvious to one skilled in the art to use any water soluble material, including Kraft paper to form the envelope for the chlorine-generating composition. Without a showing of criticality or unexpected results, the use of Kraft paper is not seen as a patentable difference.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to put the chlorine-generating composition in a bag, either a water-insoluble one as suggested by CN '244 or a water-soluble one as suggested by CA '238

to form bags of pre-measured amount of the chlorine-generating composition and such bags would be conveniently added to the water to form chlorine dioxide.

Applicant's arguments filed May 17, 2004 have been fully considered but they are not persuasive.

The rejection over CN reference in view of Applicants' amendment to claim 26 to require "uncoated metal chlorite". However, such limitation is considered as being new matter. This rejection will be reinstated if the new matter is removed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stan Silverman can be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.

*Ngoc-Yen Nguyen*

Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmn  
June 28, 2004